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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,130	08/06/2001	Chun-Chieh Chen	U 013583-9	8942

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EXAMINER

SALVATORE, LYNDIA

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 08/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/923,130

Applicant(s)

CHEN ET AL.

Examiner

Lynda M Salvatore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 20-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-19 drawn to a carrier for cell attachment classified in class 442, subclass 59+.
 - II. Claims 20-24, drawn to a method for making a carrier for cell attachment classified in class, 156 subclass various.

2. The inventions are distinct, each from the other because:

Inventions Group I and II are related as process of making and product made and are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the process limitations of wrinkling or roughing, hot pressing, and surface activation may be used to provide a variety of textured non-woven fabrics such as those used in disposable personal care articles.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with William Evans on July 2nd, 2003 a provisional election was made without traverse to prosecute the invention of a carrier for cell attachment claims 1-19. Affirmation of this election must be made by applicant in replying to this Office

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action. Claims 20-24 are withdrawn from further consideration by the examiner, 37

CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. Applicant is advised that the reply to this requirement to complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Claim Objections

7. Claims 16-19 are objected to because of the following informalities: Specifically, claim 16, which depends from article claim 15 recites "the method of claim 15". Claim 15 is not recited as a method claim. Claims 16-19 are further objected for their dependency of claim 16. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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10. Claims 1 and 13 are indefinite because it is unclear to the Examiner how the surface of the non-woven is "activated" to have cell affinity. In other words, how is the surface of the non-woven changed to an activated surface having cell affinity? Claims 2-12 and 13-19 are further rejected for their dependency on claims 1 and 13.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-5,7 and 11-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukuda et al., US 5,665,233.

The patent issued to Fukuda et al., teaches a porous filter material for the selective removal of leukocytes from a leukocyte containing suspension (Abstract). The filter material may be made from a knit, woven or non-woven fabric having a fiber diameter ranging from .3 to 3.0 microns and a three dimensional network of continuous pores (Column 5, 5-41). Fukuda et al., teaches a pore volume of 90% with a pore diameter of 1 to 30 microns (Abstract). Suitable fiber filter materials include polypropylene, polyurethane, and polyester (Column 8, 5-20). Fukuda et al., further teaches modifying the surface area of the porous filter material using graft polymerization, plasma treatment, coating, or chemical treatment (Column 12, 41-47). With regard to graft polymerization, Fukuda et al., teaches introducing a basic functional group on the surface of the porous filter material through graft polymerization (Column 13, 49-57). Suitable

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functional groups include amine, carboxyl, alkene, and phenol groups (Column 13, 64-Column 14, 30).

With regard to claim 7, Fukuda et al teaches that that fibrous, porous medium can be produced by conventional techniques such as the melt blowing method (Column 8, 34-38). As such the product-by-process of claims 1 and 13, would inherently be met by said melt blowing process since said process produces a non-woven by drawing and collecting fibers formed by extrusion.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 6 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuda et al., US 5,665,233 as applied to claim 1 above and further in view of Sussman et al., US 5,266,476.

With regard to claim 6, Fukuda et al., fails to teach a rough or wrinkled surface, however, Sussman et al., teaches that fibrous matrix may be a corrugated sheet, or that the sheet may be cut, punched or shredded to provide particles having projection areas useful in suspension or fluidized culture (Column 5, 7-11).

Therefore, motivated by the desire to enhance cell cultivation it would have been obvious to one having ordinary skill in the art at the time the invention was made to texture the surface of porous filter material of Fukuda et al., as taught by Sussman et al.

With regard to claims 8 and 10, Fukuda et al., fails to teach circular shaped non-woven, however the patent issued to Sussman et al., teaches circular micro discs with a diameter of 2mm to impart hydrodynamic properties to the packing or suspension material (column 8, 15-22).

Therefore, motivated to impart hydrodynamic properties to the packing or suspension material, it would have been obvious to one having ordinary skill in the art at the time the invention was made to produce the porous filter material of Fukuda et al., in the form of circular discs as taught by Sussman et al.

With regard to claim 9, Fukuda et al., fails to teach the claimed thickness range of the porous filter materials, however, Sussman et al., teaches a sheet thickness ranging between 25 and 250 microns. Sussman et al., further teaches that this thickness range ensures adequate diffusion of nutrients and products to and from the interior of the cell aggregate, which prevents necrosis of cells within the dense structure.

Therefore, motivated ensure proper diffusion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the thickness of the porous filter material taught by Fukuda et al., as evidenced by the teachings of Sussman et al.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M Salvatore whose telephone number is 703-305-4070. The examiner can normally be reached on M-F.

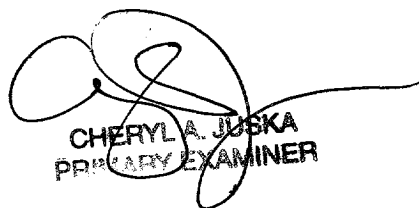
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

ls. 

July 29, 2003


CHERYL A. JUSKA
PRIMARY EXAMINER